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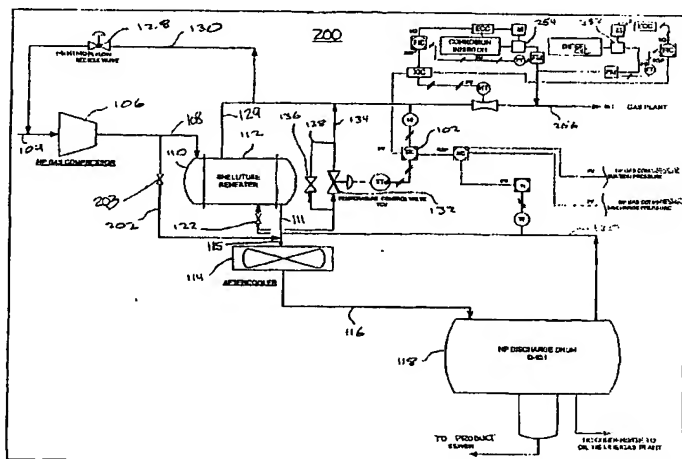
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(54) Title: CONTROLLED SUPERHEATING OF NATURAL GAS FOR TRANSMISSION



(57) Abstract: A method is provided for controlling superheating and temperature of a compressed natural gas stream and the addition of a corrosion inhibitor composition for transmission through a pipeline that includes: a. dividing a stream of natural gas discharged from a high pressure gas compressor (106) into a first portion (108) and a second portion (202); b. passing the first portion (108) of the gas from the gas compressor to a heat exchanger (112) to heat the gas to a predetermined temperature; c. passing the first portion of gas (111) exiting the heat exchanger to an aftercooler (114); d. passing the second portion (202) of natural gas discharged from the gas compressor (106) to the aftercooler (114) without passing it through the heat exchanger (112), the second portion of gas and the first portion of gas being mixed at the

aftercooler inlet and cooled by the aftercooler and discharged from the aftercooler as a cooled gas stream (116) having a temperature no greater than a first temperature; e. passing the cooled gas stream (116) from the aftercooler to a liquid discharge drum (118) to remove condensate from the cooled gas and discharging from the drum a partially dried gas stream (120) at a second temperature; f. passing the partially dried gas stream (120) from the discharge drum to the heat exchanger (112) in heat exchanging relation with the first portion of gas (108) from the gas compressor, and superheating at least a portion of the gas stream (120) to a third temperature to provide a superheated gas stream (129), the third temperature being controlled by an automated control loop responsive to a differential pressure across the gas compressor (106); and g. passing the superheated gas stream (129) into a transmission tie-line (256) and injecting a predetermined amount of a corrosion inhibitor composition into the tie-line to mix with the superheated gas stream, where the amount of corrosion inhibitor injected is proportioned in response to the third temperature.



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